

does not appertain to the intine as a thickened lamina, as Schacht implies, but from the first lies free between the two coats of the pollen, and at a later period becomes strongly attached to the extine. Consequently it clings to the extine when this is torn from the intine and gets so inverted that its setaceous outer surface is turned inwards.

The pollen-cells of *Thunbergia*, with their thickened extine disposed in spiral lines, remind us at once of the spiral-fibres of the vessels of Cryptogamia, and represent a modification of the spores of Equisetæ; whilst the pollen of *Ipomæa*, with its setaceous integument, may be considered like ligneous *Vaucheria* zoospores, as is proved by my history of the development of the latter (Botan. Zeitung, 1852, p. 95, pl. 2. fig. 12 a).

Each cilium of the vibratile epithelium of the zoospores of *Vaucheria*, and likewise the cilia of the cells of antherozoids and spiral fibres, are vesicles, which in the course of development assume a hair-like form, and it is most probable move the body to which they are attached, both by the agency of a great faculty of imbibition in their unequally thickened walls, and by great efforts in the diffusion of their contents with water—actions which proceed for some time with oscillating movements before an equilibrium is attained.

It can only be want of knowledge of the developmental history of these cells that can suggest the opinion that cilia are direct outgrowths of the primordial vesicle.

[To be continued.]

X.—On Additions to the *Madeiran Coleoptera*.

By T. VERNON WOLLASTON, M.A., F.L.S.

Fam. Dytiscidæ.

Genus EUNECTES.

Erichson, Gen. Dytic. 23 (1832).

*Eunectes subcoriaceus*, n. sp.

*E. oblongo-ovatus*, subdiaphano-coriaceus, pallide diluto-testaceus, clypeo antice leviter emarginato; capite postice nigro et macula frontali magna distincta antice profunde bipartita ornato; prothorace vitta transversa parva fracta nebuloso, ad latera oblique subrecto, angulis posticis acutiusculis, subæquali, margine postico infra angulos leviter elevato; scutello subsemicirculari; elytris punctis magnis triplici serie et punctulis minoribus parvis (anterius minutis levioribus et magis remotis) nigris notatis, utroque macula

(rarius duabus) parva sublaterali nigro-ornato; antennis pedibusque pallido-testaceis.

*Fœm.* elytro singulo fovea longitudinali sublaterali media breviuscula sat profunda impresso.

Long. corp. lin. 7.

*Habitat* Maderam australem: in cisterna quadam supra urbem Funchalensem tria specimina nuper deprehensit Dom. Bewicke.

The present *Eunectes* is closely related to a species\* which I have taken in the south of Grand Canary; and *both* of them differ from all the varieties of the widely-distributed *E. sticticus* with which I am acquainted, in being larger and more oblong, in having their pale portions of a more pallid-testaceous hue, their surface more coriaceous and subdiaphanous, their elytral fasciæ (apparently) obsolete, and their prothorax straighter at the sides, as well as (in the female sex) a little more uneven, subsinuated at its base, and with its extreme posterior margin, within the hinder angles, more evidently raised. From its Canarian ally, the *E. subcoriaceus* may be known by, *inter alia*, its clypeus being more emarginated anteriorly, by the prothorax of the female being less uneven, with the hinder angles less produced, and the posterior margin (within the latter) less evidently raised, in its scutellum being perhaps rather more obtusely rounded behind, and in its elytral punctures being smaller and less dense—those on the anterior portion being especially *much* more minute and remote. The submarginal impression, also, on the elytra of its females is somewhat less deep and more abbreviated.

It was discovered by Mr. Bewicke, in his garden, above Funchal, where he captured three specimens, concerning which I have lately received from him the following note:—"They were taken in a deep tank; and, from their habit of clinging to the perpendicular walls of it, about two feet under water, they

\* I subjoin the following comparative diagnosis of this Canarian species, which will sufficiently point out its distinctions from the Madeiran one. It may be characterized thus:—

*Eunectes subdiaphanus*, n. sp.

*E.* suboblongus, subdiaphano-coriaceus, pallide diluto-testaceus, clypeo antice subintegro; capite postice nigro et macula frontali magna antice profunde bipartita ornato; prothorace vitta transversa fracta nebuloso, ad latera oblique recto, angulis posticis obtusiusculis, subinæquali, margine postico infra angulos distincte elevato; scutello subtriangulari; elytris punctis magnis triplici serie et punctulis minoribus nigris notatis, utroque maculis duabus minutis sublateralibus nigro-ornato; antennis pedibusque pallido-testaceis.

*Fœm.* elytro singulo fovea longitudinali sublaterali media longiuscula valde profunda impresso.

Long. corp. lin. 7-7½.

*Habitat* Canariam Grandem australem, in aquis quietis ad El Charco mense Aprili A.D. 1858 a meipso repertus.

were difficult to secure. Now, in the event of their being some European species, I wish to remark that no water-plants, or anything likely to convey them, have been imported into Palmeira, so that in all probability they are distributed over a considerable area; and, further, that their habits, as far as observed, will account for their having been hitherto overlooked. The first one I took by chance; the others cost me many hours of search. They all occurred in the same tank; but had I not taken precautions to secure a moderate transparency in the water, I think I should hardly have found the last two."

Fam. *Ptiliadæ*.

Genus *PTINELLA*.

Motschulsky, Bull. Mosc. ii. (1845).

The little genus *Ptinella*, the external characters of which were enunciated by the Rev. A. Matthews in the 'Zoologist' for 1858, and the structural ones in the same Journal for 1860, may at once be known from the other groups of the *Ptiliadæ* by its posteriorly contracted prothorax (the hinder angles of which are not backwardly produced), its exceedingly short elytra, and by its very long, exposed, and somewhat robust abdomen. The species hitherto known are of a pallid hue; and in many of them the eyes have been supposed to be obsolete, but the more recent observations of Mr. Matthews have proved that this is not in reality the case. "It always appeared to me somewhat incomprehensible," says he, "how an animal unendued with sight could not only move with such surprising rapidity in any proposed direction, but also avoid the obstacles it met with in its path, as I have often seen these insects do. But the mystery is now solved; the many species comprised in the blind section of this genus (the "sans yeux" of the 'Faune Française') in reality possess as perfect visual organs as fall to the lot of any existing beetle; the only peculiarity of these organs being the fact that they are concolorous with the other parts of the head, and situated mainly on its lower surface, a small portion only being visible from above."

*Ptinella aptera*, Guér.

*P. oblonga*, testacea, subnitida et parce pubescens; oculis paulo prominentibus nigris; capite semicirculari; prothorace ad latera rotundato, basi leviter angustiore; elytris valde abbreviatis, apice singulatim sat rotundatis, versus humeros gradatim angustioribus; antennis pedibusque pallido-testaceis.

Long. corp. lin. vix  $\frac{1}{2}$ .

*Habitat* Maderam: sub cortice prope urbem Funchalensem mense Decembri A.D. 1860 detexit Dom. Bewicke.

*Ptilium apterum*, Guérin, Rev. Zool. 90 (1839).

*Trichopteryx aptera*, Gillm., St. Deutsch. Fna, xvii. 63. pl. 324. f. 4 (1845).  
*Ptilium apterum*, L. Fairm., Faun. Franç. 339 (1854).

*P.* oblong, narrow, testaceous, very slightly shining, and sparingly clothed with rather coarse decumbent pile. *Eyes* blackish, and a little prominent. *Head* and *prothorax* delicately alutaceous; the *former* nearly semicircular; the *latter* a good deal rounded at the sides, but narrower behind than in front, and with the *extreme* hinder angles very minutely prominent, free from foveæ. *Elytra* very short, finely punctured, rather rounded at the sides, and gradually narrower towards the shoulders; each of them separately rounded-off behind. *Abdomen* largely uncovered, and apparently free from additional erect hairs. *Antennæ* and *legs* very pale.

For this important addition to the Madeiran Coleoptera we are indebted to the researches of Mr. Bewicke, who, during December 1860, detected several specimens of it "in a blue mould, under bark," near Funchal. The Rev. A. Matthews informs me that he believes it to be strictly identical with the *P. aptera* of more northern latitudes, the only appreciable difference being that in the examples from Madeira the eyes are blackish (instead of concolorous with the rest of the surface), and therefore more conspicuous than is usually the case. But as he likewise assures me that he has lately captured, even in England, specimens of the *aptera* in which the eyes are also dark, I conclude, with him, that this character is probably a variable one, and perhaps in some measure dependent on the greater or less intensity of the light under which the species may happen to have been bred.

Fam. Lathridiadae.

Genus MONOTOMA.

Herbst, Natursyst. v. (1793).

*Monotoma longicollis*, Gyll.

*M. angusta*, picea, subnitida; oculis fere ad basin capitis sitis; capite prothoraceque leviter punctulatis, hoc ad latera subrecto, angulis anticis in spinam brevem obtusam productis, postice leviter bifoveolato; elytris leviter seriatim punctatis; antennis pedibusque rufo-testaceis.

Long. corp. lin.  $\frac{3}{4}$ .

*Habitat* Maderam, a Dom. Bewicke ad S. Antonio da Serra, æstate 1859, reperta.

*Monotoma longicollis*, Schönherr, in litt.

*Cerylon longicolle*, Gyll., Ins. Succ. iv. 635 (1827).

*Monotoma longicollis*, Aubé, Ann. de la Soc. Ent. de France, vi. 467. pl. 17. f. 8 (1837).

— —, Redt., Fna Austr. 203 (1849).

*M.* smaller, narrower, and less setose than any of the Madeiran

Monotomas hitherto detected, and rather more parallel in outline; piceous, and slightly shining. *Head* and *prothorax* lightly punctured, the punctures being small and with a tendency to be disposed in clusters (of twos and threes): the *former* with the *eyes* situated near the base, and with the hinder rim narrow and prominent; the *latter* with the sides a good deal straightened, and with the anterior angles produced into a very short but thickened and obtuse spine, and with the two basal foveæ rather distinct. *Elytra* hardly (if at all) diluted in colouring at the base, and finely seriate-punctate. *Limbs* rufo-testaceous.

Two specimens of the European *M. longicollis* were captured at S. Antonio da Serra (in Madeira proper) by Mr. Bewicke, during the summer of 1859. This gives us no less than five *Monotomas* for the island-fauna, viz. the *spinicollis*, Aubé, *congener*, Woll., *quadricollis*, Aubé, *4-foveolata*, Aubé, and *longicollis*, Gyll.; and I may here mention that M. Aubé, to whom I lately transmitted an example of my *M. congener* for inspection, was scarcely able to detect sufficient differences in it to warrant its separation (in his opinion) from the common *M. picipes*, to which it certainly approaches very closely. It is possible, therefore, that it may be but a phasis of that insect, in which case the whole five species will be ordinary European ones. Nevertheless, having no longer in my possession the original types of the *M. congener*, from which I drew up my diagnosis, in 1857, I cannot now re-examine them, and so will not at present venture to amalgamate them with their more northern ally.

### Fam. Corylophidæ.

#### Genus MICROSTAGETUS, nov. gen.

*Corpus* minutissimum, breviter ovali-obovatum antice obtusum, sericeo-pubescent, convexum: *capite* sub prothorace abscondito: *prothorace* subsemicirculari, angulis posticis acutiusculis sed vix productis: *scutello* sat magno, semicirculari-triangulari: *elytris* apice truncatis, pygidium vix tegentibus: *alis* amplissimis, longe ciliatis et punctulis dense irroratis. *Antennæ* distincte 11-articulatæ, graciles, clavatæ, articulis 1<sup>mo</sup> et 2<sup>do</sup> magnis robustis (illo longiore, hoc subrotundato-clavato), sex sequentibus (i. e. ad clavam) minutis sed inter se diversis, 3<sup>tio</sup> intus versus basin oblique excavato, 4<sup>to</sup> brevissimo (tertio quintoque paulo angustiore), 5<sup>to</sup> quarto majore latiore intus obtuso rotundato, 6<sup>to</sup> minutissimo angusto, 7<sup>mo</sup> multo majore crassiore transverso-subquadrato latiusculo, 8<sup>vo</sup> hoc multo angustiore minuto, 9<sup>no</sup>, 10<sup>mo</sup> et 11<sup>mo</sup> maximis clavam magnam laxam triarticulatam efficientibus (9<sup>no</sup> et 10<sup>mo</sup> subpoculiformibus, 11<sup>mo</sup> paulo angustiore ovali). *Pedes* ut in *Sericodero*, graciles, *postici* valde distantes: *tibiis* subrectis, apicem versus vix latioribus, ad apicem internum minutissime calcaratis: *tarsis* (nisi fallor) 4-articulatis,

articulo 2<sup>do</sup> subtus producto, 3<sup>to</sup> minuto, ultimo elongato clavato *unguiculis* simplicibus munito.

*Obs.* Genus corpore minutissimo pallido sericeo, prothorace antice semicirculari (caput totum tegente) alisque amplissimis ciliatis *Sericoderus* affinitate proximum et prima facie illum simulans, sed species est minor, antice minus dilatata obtusa, prothoracis angulis posticis multo minus acutis (vix productis) et præcipue antennis 11- (nec 10-) articulatis, articulis inter se diversis. Cum *Moronillo*, Jacq. Duv., antennis 11-articulatis congruit, sed articuli sunt valde dissimiles, corpus minus est necnon pubescens pallidum alatum (haud glabrum apterum) et caput sub pronoto omnino absconditur. Ab *Orthoperus* (cui aliquo modo approximatur) antennarum 11- (nec 9-) articularum structura necnon capite toto sub prothorace recondito, præter cætera, differt.

Α μικρός, parvus, et σταγερός, gutta.

The diminutive insect for which the present genus is established would appear, at first sight, to partake almost equally of *Sericoderus* and *Orthoperus*,—agreeing with the former in its pallid sericeous surface and anteriorly-semicircular prothorax (which entirely covers the head), and with the latter in its very minute, suboval body, and in its posterior prothoracic angles being almost unproduced. Nevertheless it is at once separated from them both by the structure of its antennæ, which are not only 11-articulate (instead of 10- and 9- respectively), but have the proportions of their intermediate joints also quite different. In minor details, *Microstagetus* recedes from *Sericoderus* in its smaller size, more oval (or less obovate) outline, and in its prothorax being less widened and with its hinder angles almost unproduced; whilst from *Orthoperus* its totally concealed head will, apart from the characters of its antennæ, immediately remove it. In the number of its antennal joints it is (judging from M. Jacquelin-Duval's description and figure) coincident with *Moronillus*, but in the shape and relative proportions of those joints it is perfectly distinct; whilst in its still smaller size, pallid hue, largely-developed wings, and pubescent surface it still further recedes from that genus, which (like the Madeiran *Glaeosoma*\*) is stated to be both glabrous and apterous.

\* Until it be demonstrated either that I was wrong in considering the antennæ of *Glaeosoma* to be 10-articulate, or that M. Jacquelin-Duval was mistaken in regarding those of *Moronillus* as composed of 11 joints, it is difficult to conceive on what principle the latter has cited (*vide* 'Genera des Coléoptères d'Europe, ii. 234) my Madeiran genus as a synonym of his *Moronillus*, from the south of France; for not only have I described the antennæ of *Glaeosoma* as merely 10-articulate, but have even given a figure of them; so that (if he had doubted my statement) he might surely have counted for himself! I admit that the two insects are very much alike in external *facies* and sculpture; nevertheless, on comparing lately a specimen of his *M. ruficollis*, in the collection of the British Museum, with the

The intermediate antennal joints, indeed (*i. e.* those between the second and the club), of this insect are very peculiar, and quite unlike (in their proportions) those of any other genus of the *Corylophidæ* with which I am acquainted. In fact, although the whole of them are in reality minute, they may be described as *alternately large and small*. The 1st, 3rd, and 5th, however (which belong to the larger set), gradually increase in size,—the 1st being obliquely scooped out towards its base internally, the third thick and blunt on its *inner* side, but narrower externally, and the 5th altogether much larger and thicker, being somewhat squarish-transverse, and very obtuse internally. The 2nd, 4th, and 6th (which constitute the smaller series) are, on the other hand, very diminutive, and also considerably narrower than the above-mentioned alternate three; nevertheless even *they* increase a little in dimensions, since the 2nd is so thin (or short) as to be scarcely traceable, whilst the 4th is more evident, and the 6th (although extremely minute) *comparatively* large. In the two greatly enlarged basal articulations, and the three which form the club, *Microstagetus* is coincident with the other known members of the *Corylophidæ*.

Up to the present date, therefore, we have eight genera which have already been made known in this small but interesting family, namely, *Sacium* (= *Clypeaster*, olim), *Moronillus*, and *Microstagetus*, in which the antennæ are composed of *eleven* joints; *Arthrolips*, *Sericoderus*, and *Glæosoma*, in which the number of these articulations is reduced to *ten*; and *Corylophus* and *Orthoperus*, in which it is only *nine*.

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unique example of my *G. velox*, they certainly did not appear to me to be absolutely identical; so that the recorded dissimilarity in the structure of their respective antennæ (not merely of the actual *number* of the joints, *but also of the relative proportions of the latter inter se*) should at least cause us to hesitate before concluding that the Madeiran and French insects are positively coincident. Yet, in spite of these important discrepancies (discrepancies at any rate *as yet on record*, whether in reality true or false), M. Duval, *without even alluding to them*, identifies *Glæosoma* with *Moronillus*, and refers to my details of the oral organs of the former in order to fill up his diagnosis of the latter. And, moreover, even assuming these two genera to be identical, it is at least a question whether M. Duval's name or mine has the priority, since they were both published in the same year,—mine, too, *accompanied by a figure* (both of the insect and dissections), and his without it. I may just add that, in my paper on "Madeiran Additions," given in the 'Annals of Natural History' for last year, I acted (without going further into the question) on the hypothesis that M. Duval was of course correct in his conclusion about *Glæosoma*, and consequently made, amongst others, the following observation: "for *Glæosoma velox*, Woll., read *Moronillus ruficollis*, Jacq.-Duval." But, after what has been said above, I need scarcely add that I must retract this remark *in toto*,—at least until further evidence shall settle the question, first as to coincidence of the two genera, and secondly as to their relative priority.

*Microstagetus parvulus*, n. sp.

*M. ovali-obovatus*, rufo-testaceus, sericeo-pubescent; prothorace nitidissimo, impunctato; elytris nitidis, vix obscurioribus et (oculo valde armato) minutissime et levissime punctulatis; antennis pedibusque vix pallidioribus.

Long. corp. lin. vix  $\frac{1}{2}$ .

*Habitat* Maderam, hinc inde sub quisquiliis degens.

*M.* like the *Sericoderus lateralis*, but shorter, smaller, and less widened anteriorly; rufo-testaceous (the elytra a trifle obscurer than the prothorax), and more or less clothed with a decumbent silken pubescence. *Prothorax* highly polished and quite impunctate. *Elytra* not quite so shining, and (under a very high magnifying power) beset with most minute and lightly impressed punctules, which, however, are less distinct than those on the *S. lateralis*, and with the single stria which exists alongside the suture less impressed than is the case in that insect.

*Limbs* a little paler than the rest of the surface.

Twelve specimens only of this insignificant little insect have as yet come under my observation,—three of which were taken by myself (beneath vegetable refuse) near Funchal, and the rest by Mr. Bewicke at S. Antonio da Serra and the Praia Formosa.

## Fam. Meloidæ.

## Genus ZONITIS.

Fabricius, Syst. Ent. 126 (1775).

*Zonitis imperialis*, n. sp.

*Z. cylindrica*, nigra, dense pubescens; capite prothoraceque profunde punctatis; scutello magno; elytris pallido-rufis, utroque maculis duabus (antica minore et interdum obsoleta) nigrescentibus ornato; antennis pedibusque longissimis robustis, unguiculis tibiaramque calcariis piceo-ferrugineis.

Long. corp. lin. 5-7.

*Habitat* Maderam et Portum Sanctum, inter flores in apricis inferioribus hinc inde sat vulgaris.

*Zonitis 4-punctata*, Woll. [nec Fab. 1792], Ins. Mad. 530 (1854).

— —, id., Cat. Mad. Col. 163 (1857).

*Z.* large and cylindrical, and densely clothed with pubescence, which is black, robust, and suberect on the black portions, and pale, silken, and decumbent on the elytra. *Beneath* black. *Head* and *prothorax* black, deeply and closely punctured: the former rather large and wide posteriorly, and flattened between the eyes; the latter somewhat uneven, and with the hinder disk convex, where, moreover, it has an abbreviated central channel. *Scutellum* large and black. *Elytra* pale rufous, and each of them ornamented with two blackish spots on its disk, the anterior of

which is the smallest, and occasionally obsolete. *Antennæ* and *legs* very long, robust, and deep black, except the *tibial spurs* and *tarsal claws*, which are piceo-ferruginous.

*Var. β.* Elytra entirely immaculate, and usually of a slightly paler hue.

I have hitherto regarded this insect as identical with the *Zonitis 4-punctata* of the south of Europe; but a more accurate comparison of it lately with specimens from Lombardy has convinced me that it cannot be referred to that species (however much it may resemble it at first sight), presenting a combination of small structural characters essentially its own; and I have therefore given a fresh description of it, in which its peculiarities are more fully portrayed. It differs from the *Z. 4-punctata* in being a little larger, and in having its head proportionally a trifle broader and its scutellum somewhat longer, in the pubescence of its dark portions being rather more elongate and dark, and in its limbs being robuster, less abbreviated (which is particularly evident in the antennæ and tarsi), and of a much deeper black,—the last antennal joint, moreover, being cylindric, instead of gradually tapering as in that insect. Its elytra also are a shade darker and perhaps a trifle less pubescent, and their *extreme apex* (instead of being black) is concolorous with the rest of the surface.

### Fam. Staphylinidæ.

#### GENUS LEPTACINUS.

Erichson, Käf. der Mark Brand. i. 429 (1837).

#### *Leptacinus parumpunctatus*, Gyll.

*L. niger*, nitidus; capite utrinque parce sed valde profunde punctato, ad basin recte truncato; prothorace postice gradatim angustato, seriebus dorsalibus 5- (vel 6-) punctatis; elytris versus latera seriatis punctatis, angulo apicali externo testaceo; antennis fusco-piceis; pedibus piceo-testaceis.

Long. corp. lin.  $2\frac{1}{2}$ .

*Habitat* Maderam, ad Palheiro prope Funchal a Dom. Bewicke detectus.

*Staphylinus parumpunctatus*, Gyll., Ins. Suec. iv. 481 (1827).

*Gyrophypnus parumpunctatus*, Mann., Brachel. 33 (1831).

*Leptacinus parumpunctatus*, Erich., Gen. et Spec. Staph. 353 (1838).

*L.* black and shining. *Head* and *prothorax* highly polished: the *former* straightly truncated behind, very deeply but sparingly punctured at the sides, and with the frontal sulci exceedingly deep and distinct; the *latter* gradually narrowed behind, with a longitudinal row of five (occasionally six) large punctures on either side of its disk, and with about five more arranged in a curve to-

wards either edge. *Elytra* generally a little diluted in colouring posteriorly, but always with the outer apical angle testaceous, very sparingly seriate-punctate (more evidently so towards either side). *Antennæ* brownish piceous, but a little brighter at their base. *Legs* piceo-testaceous.

A single specimen of the common European *L. parumpunctatus* has lately been forwarded to me by Mr. Bewicke, by whom it was captured, amongst hay-stack refuse, at the Palheiro (in Madeira proper), during November 1860. Though probably an introduced insect from more northern latitudes, this is the second species of *Leptacinus* which the researches of Mr. Bewicke have added to the fauna,—the *L. linearis*, Grav., having been recorded by me last year, on the authority of five examples which he detected (under similar circumstances) at S. Antonio da Serra. I may add that I have also taken it in Lanzarote, Fuerteventura, Grand Canary, Teneriffe, and Palma, of the Canary Islands.

At the close of my last year's Papers (published in the 'Annals of Natural History') on "Additions to the Madeiran Coleoptera," I stated that the species which had been detected in those islands up to that date amounted to 642. Since, however, through not having the original type any longer in my possession, I had inadvertently re-described an insect (the *Rhyncolus capitulum*) which had been already characterized by me during the preceding year, the number should properly have been 641; so that, when the five\* species here enumerated are taken into account, we shall have 646 as the total number which has hitherto been ascertained to occur at the Madeiras. I have still two or three doubtful forms which, from being represented by single specimens, I cannot safely pronounce upon until further material has been obtained; nevertheless, from the slowness with which additions to the fauna are now brought to light—and that, too, despite the careful researches of Mr. Bewicke, Senhor Moniz, the Barão do Castello de Paiva, and Mr. E. Leacock (particularly, however, of Mr. Bewicke, to whose indefatigable labours the present novelties are due)—we may fairly conclude that we are fast approaching the maximum to which our list can be expected, *as limited by the existing fauna*, to reach. Fresh importations will almost certainly from time to time take place; for since it is an undoubted fact that minute Coleoptera are frequently naturalized in the island (which indeed *must* be the case so long as the gardens of the English residents are liable to be replenished, year after year, with various plants, whether for use or ornament, from more northern latitudes), it is evident

\* I say "five," and not six, because the *Zonitis imperialis* is merely an old species under a new name.

that we may look hereafter for occasional additions from the ranks of the ordinary European Coleoptera (such as the smaller *Staphylinidæ*, and other more or less mundane forms) of easy diffusion. But, be this as it may, there seems good reason to believe that no considerable number of *truly indigenous* species can have now escaped our combined observations; and that consequently, if we choose (allowing a small margin for future introductions) to estimate the Madeiran Coleoptera at, *ore rotundo*, somewhere between 650 and 700 species, we shall probably advance a tolerably correct opinion as to the actual extent of that department of the fauna.

Before concluding this short paper, I may just call attention to the few following facts:—

1. My friend Dr. Schaum, of Berlin, thinks that the common Madeiran *Parnus* may *possibly* be distinct from the universal *P. prolifericornis*, as being “a trifle smaller and shorter, with its pubescence a little more brown, and its elytra more sparingly and coarsely punctured;” but, after comparing it very carefully with British specimens of that species, I must confess that I cannot detect any appreciable difference between the two, unless it be that the Madeiran one is perhaps, *on the average*, not quite so large.

2. *Acratichis pumila* (Ins. Mad. 109).—The Rev. A. Matthews informs me that this insect cannot properly be referred to the *T. pumila* of Erichson, but that it is more akin to the European *T. brevipennis*, from which it nevertheless differs in being rather larger, more shining, and more coarsely punctured. In the dilated joints of its anterior tarsi it approaches both of those species; but, apart from other characters, the shape of the joints is, according to Mr. Matthews, quite different. I would propose for it, therefore (having already *described* it), the specific name of *insularis*.

3. *Microchondrus* (i. e. *Symbiotes*) *domuum* (Ins. Mad. 197).—This is clearly identical, as Mr. Janson has pointed out to me, with the *Symbiotes pygmaeus*, Hampe.

4. The six *Ptini* (Nos. 200–206) which I indicated in the ‘Ins. Mad.’ in 1854, under the subgeneric title of *Sphæricus*, and subsequently (in 1857), in my ‘British Museum Catalogue,’ under that of *Trigonogenius*, Solier (as being the older name), must be regarded as generically distinct from the *Ptini proper*, and be quoted as *Sphærici*, since M. Jacq.-Duval has lately informed us (*vide* ‘Genera des Col. d’Europe,’ iii. p. 211) that he has examined the true *Trigonogenii*, from Chili, and finds them structurally different from the Madeiran and Mediterranean insects. M. Duval, indeed, proposed last year (Glanures Ent. 137)

for these aberrant *Ptini* the title of *Tipnus* (even with the actual knowledge, moreover, that I had both previously separated them under that of *Sphæricus*, and had given careful figures of no less than three!); but, in spite of this, it is of course evident that *Sphæricus* has the priority, and must therefore be retained.

5. *Tomicus Dohrnii* (Ins. Mad. 290).—It seems likely, according to information which I have received from Mr. Janson (though I have not yet myself had an opportunity of comparing the two species), that this insect will prove to be identical with the *Bostrichus Saxesenii* of Ratzeburg.

6. *Phlæophthorus perfoliatus* (Ins. Mad. 301).—It is pretty nearly certain that this insect is coincident with the *Ptinus rhododactylus* of Marsham (Ent. Brit. 87, 1802); but the *genus* must certainly be retained; so that the species should be quoted as the *Phlæophthorus rhododactylus*, Marsham. In further confirmation of its being identical with the European insect, I may state that several specimens of it were taken by Mr. Bewicke, at S. Antonio da Serra, during the summer of 1859, out of decayed stems of the common Broom, under which circumstances it very frequently occurs in more northern latitudes.

7. *Rhyncolus capitulum* (Ann. Nat. Hist. 3rd ser. ii. 410, 1858).—As already stated, I inadvertently re-characterized this insect, in my last year's "Additions to the Madeiran Coleoptera," under the name of *Hexarthrum compressum*. The mistake arose, first, from the original type being no longer in my possession for comparison; and secondly, through my having failed to examine with sufficient care, whilst describing it, the structural features of the "*R. capitulum*,"—thus not perceiving at the time that it possessed but six joints to its funiculus, and that it was therefore no *Rhyncolus* at all. Hence, whilst the *genus Hexarthrum*, which I enunciated in 1860 (Ann. Nat. Hist. 3rd ser. v. 448), must be retained, the specific title of *compressum* should of course be cancelled; and the insect will stand as *Hexarthrum capitulum*.

8. *Rhyncolus tenax* and *calvus* (Ins. Mad. 307; and Ann. Nat. Hist. 3rd ser. v. 448).—In a memoir on the "Atlantic *Cossonides*," lately published in the 'Trans. of the Ent. Soc. of London' (*vide* new series, vol. v.), I stated that the two Madeiran insects which I have hitherto quoted as *Rhyncoli* will (from the shape of their rostra and the proportions of the joints of their comparatively elongate antennæ) be better referred to *Phlæophagus*; and the only doubt that now remains is, whether the *Caulophilus sculpturatus* of the 'Ins. Mad.' should not, consequently, be merged into *Rhyncolus*. As to this latter question, I will not at present, in the absence of my original type, attempt to solve it.

9. *Pentarthrum Monizianum* and *Bewickianum* (Ann. Nat. Hist. 3rd ser. v. 450, 451, 1860).—When describing these two insects last year, I stated the exact points of their structure in which they recede from *Pentarthrum proper*, as then represented by a single species (the *P. Huttoni*), discovered by my nephew eight years ago in the west of England; and I merely admitted them into that genus on account of their 5-jointed funiculus, and through a disinclination to multiply names more than was absolutely necessary amongst these small members of the lignivorous *Rhynchophora*. Since my diagnoses, however, were published, the detection of another true *Pentarthrum*, by Mr. Bewicke, in the Island of Ascension, has so completely confirmed my original formula of the group (*vide* Ann. Nat. Hist. 2nd ser. xiv. 129, 1854), that, as recently stated in my paper (above alluded to) on the Atlantic *Cossonides*, it can no longer be made to embrace these two (nearly blind) Madeiran Curculios; and I consequently proposed for them the generic title of *Mesoxenus*. They must therefore be quoted as the *Mesoxenus Monizianus* and *Bewickianus*. For the precise differential characters of the genus, I must refer to my last year's paper in the 'Annals of Natural History,' and to a recent memoir on the "Atlantic *Cossonides*" which has just been published in the 'Trans. of the Ent. Soc. of London.'

#### XI.—*Observations on the Bignoniaceæ.*

By JOHN MIERS, F.R.S., F.L.S. &c.

[Continued from vol. vii. p. 396.]

In the herbarium of the British Museum I find a plant, in fruit, from the neighbourhood of Rio de Janeiro, the seeds of which differ from those last described: the specimen has no flower, so that it cannot be determined to be a species of *Adenocalymna*\*. The capsule is compressed, not cylindrical as in *A. scansile*, and the valves are proportionally thinner. The seeds are uniserial and much more compressed; the central disk is testudiniform, one of its sides, that of the hilum, being straight,

\* I take this opportunity of confirming what I formerly stated (vol. vii. p. 266) concerning the little dependence to be placed on the calyx as a constant and unerring test for generic discrimination. Perhaps no genus in the family offers a more striking feature than *Adenocalymna*, in its peculiar calyx, which gave origin to its name; but I find in Gardner's collection a plant, allied to *Dolichandra*, with an entire, tubular, coriaceous, pulverulent calyx, marked with polished glands placed biserially below the margin, just as in *Adenocalymna*; and yet it is far removed from that genus on account of the difference of its habit, of its corolla, in the structure of its anthers, its ovary, its thick flat siliquose capsule, and its seeds.